

PERMIT CHECK LIST

The following people have reviewed the permit:

Reviewing Permitting Engineer: _____

Air Inspector: _____

Air Compliance Manager: _____

Date: January 7, 2014

Source Name: American Borate Company Registration Number: 61671 Id. Number: 51-550-00259

Source Location: 4100 Buell Street, Chesapeake 23324

Mail Address: 5700 Cleveland Street, VA Beach 23462

Source Status: ☐ Greenfield ☒ Currently operating

Source Classification: ☐ Minor ☒ SynMinor ☐ State Major ☐ PSD Major ☐ TV Major

Permit Action: This permit action is for the proposed addition of a proposed Colemanite/Ulexite/Boric Acid materials transfer and loading system.

☒ **Inspector Contacted/Consulted**

Permit Action Program:

☐ NSR ☒ SOP ☐ TV ☐ Major HAP ☐ General

Permit Action Type:

☐ Exemption

☐ New ☒ Significant Amendment/Modification

☐ Minor Amendment/Modification ☐ Administrative Amendment ☐ Renewal

☐ State Major ☐ PSD ☐ Non-Attainment ☐ General Permit

Y (Y/N) Permit Includes All Emission Units at Source.

Y (Y/N) Permit Allows Source to avoid Title V/MACT/etc.

After this permit, source is: ☐ Major (A) ☐ Minor (B) ☒ Synthetic minor (SM)
(PM Pollutant, PM-10 Pollutant)

Permit Application Review

☒ Permit application submitted, or ☐ Letter Request

Application Received Date: November 8, 2013

Application Complete Date: November 13, 2013 (Notification of application fee payment rec'd)

Permit Deadline Date: February 11, 2014

☒ Document Certification Form received

N Confidential information with sanitized copy.

This permit supersedes permit(s) dated: September 26, 2013

Regulatory Review

BACT Determination (check one):

☒ Not applicable - SOP

N (Y/N) NSPS/MACT/NESHAPS Applicability

Y (Y/N) Existing Rules (9 VAC 5 Chapter 40) Applicability: If Y, Rule(s): Rule 4-4

Toxic Pollutants (check one):

☐ Exempt, or ☐ in compliance with 9 VAC 5-60-220, or ☒ not evaluated

Modeling (check one):

☐ Attached (including background monitors), or

☐ Copy of approval letter from modeling section,

☒ No modeling required by agency policy (< modeling significance levels, etc.)

Regulatory Review (cont.)

Site Suitability:

☒ Site suitable from an air pollution standpoint, inspection date: June 20, 2011

☐ Calculation sheet(s) attached

☐ (Y/N) (CAM) Compliance Assurance Monitoring Applicable

Permit includes: ☐ Stack Testing ☐ CEM ☐ VEE by source

Public Participation

☐ (Y/N) Public Noticed. If yes, Public Notice Date: Wednesday, January 8, 2014

☐ (Y/N) Public Notice Comments.

☐ (Y/N) Public Hearing.

EPA Review

☐ (Y/N) EPA Review. If yes, Date proposed permit sent to EPA: Thursday, January 2, 2014

☐ (Y/N) EPA Comments.

Other Comments and Final Recommendations (attach memo or list below):

Comments: American Borate Company (Source) has submitted a Form 7 application requesting its September 26, 2013 SOP be amended for the addition of a Colemanite/Ulexite/Boric Acid materials transfer and loading system project to provide backup load-out capability during primary material handling equipment down-times and also during periods of increased product demand. The electrically-driven enclosed screw conveyor load-out system was previously permitted, but was replaced by the Source with the current pneumatic load-out system now in use.

NSR Article 6 Permit Applicability Determination:

NSR Article 6 permitting applicability for PM was determined for the proposed commodity material loading system project using the following:

Colemanite/Ulexite/Boric Acid throughput from the proposed material transfer project = 20 tons per hour (maximum)

Colemanite has an emission factor of 0.13 lbs/ton: Ulexite has an emission factor of 0.016 lbs/ton: therefore, the emission factor for Colemanite was used in the determination of uncontrolled PTE.

Proposed Colemanite/Ulexite/Boric Acid material transfer pathway will have four (4) transfer points from the warehouse to the receiving tanker railcar or truck load-out.

Uncontrolled Particulate emissions from unloading pathway:

$PM = (8,760 \text{ hrs/yr}) \times (20 \text{ tph}) \times (4 \text{ transfer points}) \times (0.13 \text{ lbs/ton}) / (2000 \text{ lbs/ton}) = \underline{\underline{45.6 \text{ tpy uncontrolled PM}}}$

$PM-10 = (8,760 \text{ hrs/yr}) \times (20 \text{ tph}) \times (4 \text{ transfer points}) \times (0.064 \text{ lbs/ton}) / (2000 \text{ lbs/ton}) = \underline{\underline{22.4 \text{ tpy uncontrolled PM-10}}}$

$PM-2.5 = (8,760 \text{ hrs/yr}) \times (20 \text{ tph}) \times (4 \text{ transfer points}) \times (0.0093 \text{ lbs/ton}) / (2000 \text{ lbs/ton}) = \underline{\underline{3.3 \text{ tpy uncontrolled PM-2.5}}}$

The uncontrolled exempt threshold level for PM is 15 tpy; PM-10 is 10 tpy; PM-2.5 is 6 tpy for a project source. Therefore, NSR Article 6 permitting for the proposed commodity materials unloading project is applicable for PM and PM-10 emissions.

BACT Applicability for the Proposed Commodity Materials Transfer System:

State BACT applicability for the proposed commodity materials loading system project was determined in the same manner as was for permit applicability; therefore, because permit applicability was triggered for PM and PM-10, BACT applicability is also triggered. As such, BACT is applicable to the new method of commodity materials transfer and loading. BACT for the proposed commodity material loading system project would consist of using the electrically-driven enclosed screw conveyor previously permitted, the load-out hopper located inside the warehouse, and the complete

Regulatory Review (cont.)

enclosure of the feed input point located at the hatch or opening of the receiving tanker railcar or truck, along with the placement of a fine meshed filter over each remaining open hatch or tarp hole. The use of these emission controls would result in controlled particulate emissions of 1.37 tons of PM, 0.67 tons of PM-10, and 0.10 tons of PM-2.5 per year, which meets BACT.

Permit Action:

This permit action is a significant amendment to the September 26, 2013 state operating permit due to the emission increase in PM and PM-10 from the operation of the commodity materials transfer system, which resulted in a change to the case-by-case determination of these two pollutant emission limits in the permit. In addition, the proposed project is considered a modification as there will be a physical change to the method of operation for the commodity materials transfer to receiving railcars and trucks. A 30-day public notice period will be required before the permit can be issued.

Final Recommendation: Recommend Approval.

Air Permit Writer's Signature:

Air Permit Manager's Signature:
